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OLDHAM, VIRGINIA 22529

W. W. HYNSON, VICE CHAIRMAN
ELECTION DISTRICT NO. 4
COLONIAL BEACH, VIRGINIA 22443

RUSS CULVER
ELECTION DISTRICT NO. 2
MONTROSS, VIRGINIA 22520

LYNN C. BROWNLEY
ELECTION DISTRICT NO. 3
MONTROSS, VIRGINIA 22520

LARRY ROBERSON
ELECTION DISTRICT NO. 5
COLONIAL BEACH, VIRGINIA 22443



WESTMORELAND COUNTY, VIRGINIA

Board of Supervisors

MONTROSS, VIRGINIA 22520-1000

NORM RISAVI
County Administrator
P. O. BOX 1000
MONTROSS, VIRGINIA 22520-1000
PHONE: 804/493-0130
FAX: 804/493-0134
E-mail: nrisavi@westmoreland-county.org
Web Page: www.westmoreland-county.org

RECEIVED
MAY 18 2009
PRO

15 May 2009

Ms. Denise Mosca
Department of Environmental Quality
Piedmont Regional Office
4949-A Cox Road
Glen Allen, VA 23060

**RE: Montross – Westmoreland WWTP
VAPDES #0072729**

Dear Ms. Mosca:

The enclosed signature pages and data packages are forwarded to you as part of the permit application for the above-referenced facility.

If you have any questions, please feel free to contact me at (804) 493-9395.

Sincerely,

Norm Risavi
County Administrator

NR:ibt

Enclosures

RECEIVED

MAY 18 2009

Please print or type in the unshaded areas only.

Form Approved. OMB No. 2040-0086.

FORM 1 GENERAL		U.S. ENVIRONMENTAL PROTECTION AGENCY GENERAL INFORMATION Consolidated Permits Program (Read the "General Instructions" before starting.)		I. EPA I.D. NUMBER F NA	
LABEL ITEMS		PLEASE PLACE LABEL IN THIS SPACE		GENERAL INSTRUCTIONS If a preprinted label has been provided, affix it in the designated space. Review the information carefully; if any of it is incorrect, cross through it and enter the correct data in the appropriate fill-in area below. Also, if any of the preprinted data is absent (the area to the left of the label space lists the information that should appear), please provide it in the proper fill-in area(s) below. If the label is complete and correct, you need not complete items I, III, V, and VI (except VI-B which must be completed regardless). Complete all items if no label has been provided. Refer to the instructions for detailed item descriptions and for the legal authorizations under which this data is collected.	
I. EPA I.D. NUMBER					
III. FACILITY NAME					
V. FACILITY MAILING ADDRESS					
VI. FACILITY LOCATION					
II. POLLUTANT CHARACTERISTICS					
INSTRUCTIONS: Complete A through J to determine whether you need to submit any permit application forms to the EPA. If you answer "yes" to any questions, you must submit this form and the supplemental form listed in the parenthesis following the question. Mark "X" in the box in the third column if the supplemental form is attached. If you answer "no" to each question, you need not submit any of these forms. You may answer "no" if your activity is excluded from permit requirements; see Section C of the instructions. See also, Section D of the instructions for definitions of bold-faced terms.					
SPECIFIC QUESTIONS		Mark "X"		SPECIFIC QUESTIONS	
		YES	NO	FORM ATTACHED	
A. Is this facility a publicly owned treatment works which results in a discharge to waters of the U.S.? (FORM 2A)		<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	
C. Is this a facility which currently results in discharges to waters of the U.S. other than those described in A or B above? (FORM 2C)			<input checked="" type="checkbox"/>		
E. Does or will this facility treat, store, or dispose of hazardous wastes? (FORM 3)			<input checked="" type="checkbox"/>		
G. Do you or will you inject at this facility any produced water or other fluids which are brought to the surface in connection with conventional oil or natural gas production, inject fluids used for enhanced recovery of oil or natural gas, or inject fluids for storage of liquid hydrocarbons? (FORM 4)			<input checked="" type="checkbox"/>		
I. Is this facility a proposed stationary source which is one of the 29 industrial categories listed in the instructions and which will potentially emit 100 tons per year of any air pollutant regulated under the Clean Air Act and may affect or be located in an attainment area? (FORM 5)			<input checked="" type="checkbox"/>		
B. Does or will this facility (either existing or proposed) include a concentrated animal feeding operation or aquatic animal production facility which results in a discharge to waters of the U.S.? (FORM 2B)			<input checked="" type="checkbox"/>		
D. Is this a proposed facility (other than those described in A or B above) which will result in a discharge to waters of the U.S.? (FORM 2D)			<input checked="" type="checkbox"/>		
F. Do you or will you inject at this facility industrial or municipal effluent below the lowermost stratum containing, within one quarter mile of the well bore, underground sources of drinking water? (FORM 4)			<input checked="" type="checkbox"/>		
H. Do you or will you inject at this facility fluids for special processes such as mining of sulfur by the Frasch process, solution mining of minerals, in situ combustion of fossil fuel, or recovery of geothermal energy? (FORM 4)			<input checked="" type="checkbox"/>		
J. Is this facility a proposed stationary source which is NOT one of the 28 industrial categories listed in the instructions and which will potentially emit 250 tons per year of any air pollutant regulated under the Clean Air Act and may affect or be located in an attainment area? (FORM 5)			<input checked="" type="checkbox"/>		
III. NAME OF FACILITY					
C. SKIP MONTROSS - WESTMORELAND WWTP					
IV. FACILITY CONTACT					
A. NAME & TITLE (last, first, & title)			B. PHONE (area code & no.)		
NORM RISAVI COUNTY ADMIN			8044930130		
V. FACILITY MAILING ADDRESS					
A. STREET OR P.O. BOX					
PO BOX 1000					
B. CITY OR TOWN			C. STATE	D. ZIP CODE	
MONTROSS			VA	22520	
VI. FACILITY LOCATION					
A. STREET, ROUTE NO. OR OTHER SPECIFIC IDENTIFIER					
160 LYELE STREET					
B. COUNTY NAME					
WESTMORELAND					
C. CITY OR TOWN			D. STATE	E. ZIP CODE	F. COUNTY CODE (if known)
MONTROSS			VA	22520	

CONTINUED FROM THE FRONT

VII. SIC CODES (4-digit, in order of priority)									
A. FIRST					B. SECOND				
C	T	I	(specify)		C	T	I	(specify)	
7	4	9	5	2	7				
15	16	17	18	19	15	16	17	18	19
C. THIRD					D. FOURTH				
C	T	I	(specify)		C	T	I	(specify)	
7					7				
15	16	17	18	19	15	16	17	18	19
VIII. OPERATOR INFORMATION									
A. NAME								B. Is the name listed in Item VII.A also the owner?	
C	WESTMORELAND COUNTY								<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO
15	16	17	18	19	20	21	22	23	24
C. STATUS OF OPERATOR (Enter the appropriate letter into the answer box: if "Other," specify.)								D. PHONE (area code & no.)	
F = FEDERAL S = STATE P = PRIVATE				M = PUBLIC (other than federal or state) O = OTHER (specify)				A 8044930130	
				M				15 16 17 18 19 20 21 22 23 24	
E. STREET OR P.O. BOX									
PO BOX 1000									
F. CITY OR TOWN									
MONTROSS									
G. STATE				H. ZIP CODE		IX. INDIAN LAND			
VA				22520		Is the facility located on Indian lands?			
						<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO			
X. EXISTING ENVIRONMENTAL PERMITS									
A. NPDES (Discharges to Surface Water)					D. PSD (Air Emissions from Proposed Sources)				
C	T	I			C	T	I		
9	N		VA0072729		9	P			
15	16	17	18	19	20	21	22	23	24
B. UIC (Underground Injection of Fluids)					E. OTHER (specify)				
C	T	I			C	T	I	(specify)	
9	U				9				
15	16	17	18	19	20	21	22	23	24
C. RCRA (Hazardous Wastes)					E. OTHER (specify)				
C	T	I			C	T	I	(specify)	
9	R				9				
15	16	17	18	19	20	21	22	23	24
XI. MAP									
Attach to this application a topographic map of the area extending to at least one mile beyond property boundaries. The map must show the outline of the facility, the location of each of its existing and proposed intake and discharge structures, each of its hazardous waste treatment, storage, or disposal facilities, and each well where it injects fluids underground. Include all springs, rivers, and other surface water bodies in the map area. See instructions for precise requirements.									
XII. NATURE OF BUSINESS (provide a brief description)									
Municipal wastewater treatment									
XIII. CERTIFICATION (see instructions)									
I certify under penalty of law that I have personally examined and am familiar with the information submitted in this application and all attachments and that, based on my inquiry of those persons immediately responsible for obtaining the information contained in the application, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.									
A. NAME & OFFICIAL TITLE (type or print)					B. SIGNATURE			C. DATE SIGNED	
Norm Risavi County Administrator								5/15/2009	
COMMENTS FOR OFFICIAL USE ONLY									
C									
15	16	17	18	19	20	21	22	23	24

FACILITY NAME AND PERMIT NUMBER:
MONTROSS-WESTMORELAND WWTP
PERMIT #VA0072729

Form Approved 1/14/99
OMB Number 2040-0086

BASIC APPLICATION INFORMATION

PART C. CERTIFICATION

All applicants must complete the Certification Section. Refer to instructions to determine who is an officer for the purposes of this certification. All applicants must complete all applicable sections of Form 2A, as explained in the Application Overview. Indicate below which parts of Form 2A you have completed and are submitting. By signing this certification statement, applicants confirm that they have reviewed Form 2A and have completed all sections that apply to the facility for which this application is submitted.

Indicate which parts of Form 2A you have completed and are submitting:

☐ Basic Application Information packet

☐ Supplemental Application Information packet:

☐ Part D (Expanded Effluent Testing Data)

☐ Part E (Toxicity Testing: Biomonitoring Data)

☐ Part F (Industrial User Discharges and RCRA/CERCLA Wastes)

☐ Part G (Combined Sewer Systems)

ALL APPLICANTS MUST COMPLETE THE FOLLOWING CERTIFICATION.

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, the information is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Name and official title Norm Risavi, County Administrator

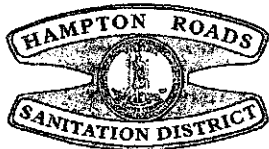
Signature 

Telephone number 804-493-0130

Date signed 5/15/2009

Upon request of the permitting authority, you must submit any other information necessary to assess wastewater treatment practices at the treatment works or identify appropriate permitting requirements.

SEND COMPLETED FORMS TO:



HRSD

P.O. BOX 5902, VIRGINIA BEACH, VIRGINIA 23471-0902 • (757) 460-7045 • FAX: (757) 460-3985

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Commissioners

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May 8, 2009

Norm Risavi
County Administrator
Westmoreland County
P.O. Box 1000
Montross, VA 22520

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MAY 11 2009

Westmoreland County
Board of Supervisors

RE: PERMIT APPLICATION

Dear Norm:

Enclosed are the analytical results, QA report, TBT and Radionuclides subcontracted data and chain of custody records for the March 12, 2009 sampling event.

Data has been emailed to Kevin Spruth at the Montross WWTP and Dick Sedgley, AquaLaw PLC.

Should you have any questions, please feel free to contact me at (757) 460-4247.

Sincerely,

Daniel L. Barker
Environmental Scientist

DLB/cmr

Enclosures

**HRSD**

P.O. BOX 5911, VIRGINIA BEACH, VIRGINIA 23471-0911 • (757) 460-4205 • FAX: (757) 460-6586

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ANALYTICAL REPORT

Project: Westmoreland Co - Montross WWTP
Customer Sample ID: Field-Blank
Project Code: WE_MONT
Sample Point: FB
Sample Date: 03/12/09

Analyte	Method	Unit	Result	Report	Analyst	Analysis	Analysis Time
				Limit ¹		Date	
<u>Total Metals</u>							
Chromium	EPA 200.8	ug/L	<0.5	0.5	CBATO	03/25/09	11:34
Selenium	EPA 200.8	ug/L	<1.0	1.0	CBATO	03/25/09	11:34
<u>Dissolved Metals</u>							
Antimony	EPA 200.8	ug/L	<0.2	0.2	CBATO	03/25/09	12:10
Arsenic	EPA 200.7	ug/L	<60	60	SWILLI	03/23/09	17:30
Cadmium	EPA 200.8	ug/L	<0.1	0.1	CBATO	03/25/09	12:10
Copper	EPA 200.8	ug/L	<0.5	0.5	CBATO	03/25/09	12:10
Lead	EPA 200.8	ug/L	<0.5	0.5	CBATO	03/25/09	12:10
Mercury	EPA 245.1	ug/L	<0.1	0.1	SLABOC	03/21/09	09:16
Nickel	EPA 200.8	ug/L	<0.5	0.5	CBATO	03/25/09	12:10
Selenium	EPA 200.8	ug/L	<1.0	1.0	CBATO	03/25/09	12:10
Silver	EPA 200.8	ug/L	<0.2	0.2	CBATO	03/25/09	12:10
Thallium	EPA 200.8	ug/L	<5	5	CBATO	03/25/09	12:10
Zinc	EPA 200.8	ug/L	3	2	CBATO	03/25/09	12:10

Notes¹ Report Limit is lowest concentration at which quantitation is demonstrated.

ND - Sample concentration non-detectable.

Authorization: Rolin ParnellDate: 3/30/09

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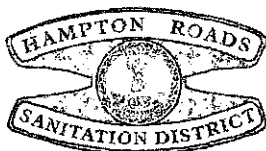
ANALYTICAL REPORT

Project: Westmoreland Co - Montross WWTP
Customer Sample ID: Final Effluent
Project Code: WE_MONT
Sample Point: FNE
Sample Date: 03/12/09

Analyte	Method	Unit	Result	Report Limit ¹	Analyst	Analysis Date	Analysis Time
<u>Autochemistry</u>							
Chlorides	SM4500-Cl ⁻ B	mg/L	52	1	JGETTI	03/17/09	13:28
Sulfide (Hydrogen sulfide)	ASTM D 4658-03	mg/L	<0.1	0.1	RMORGA	03/16/09	08:25
<u>Total Metals</u>							
Chromium	EPA 200.8	ug/L	0.5	0.5	CBATO	03/25/09	11:39
Selenium	EPA 200.8	ug/L	<1.0	1.0	CBATO	03/25/09	11:39
<u>Dissolved Metals</u>							
Antimony	EPA 200.8	ug/L	0.5	0.2	CBATO	03/25/09	12:15
Arsenic	EPA 200.7	ug/L	<60	60	SWILLI	03/23/09	17:35
Cadmium	EPA 200.8	ug/L	<0.1	0.1	CBATO	03/25/09	12:15
Chromium III (measured as Total Chromium)	Calculation	ug/L	0.5	0.5			
Chromium VI (measured as Total Chromium)	Calculation	ug/L	0.5	0.5			
Copper	EPA 200.8	ug/L	5.5	0.5	CBATO	03/25/09	12:15
Lead	EPA 200.8	ug/L	<0.5	0.5	CBATO	03/25/09	12:15
Mercury	EPA 245.1	ug/L	<0.1	0.1	SLABOC	03/21/09	09:19
Nickel	EPA 200.8	ug/L	1.2	0.5	CBATO	03/25/09	12:15
Selenium	EPA 200.8	ug/L	<1.0	1.0	CBATO	03/25/09	12:15
Silver	EPA 200.8	ug/L	<0.2	0.2	CBATO	03/25/09	12:15
Thallium	EPA 200.8	ug/L	<5	5	CBATO	03/25/09	12:15
Zinc	EPA 200.8	ug/L	74.2	2	CBATO	03/25/09	12:15

Notes¹ Report Limit is lowest concentration at which quantitation is demonstrated.

ND - Sample concentration non-detectable.

**HRSD**

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ANALYTICAL REPORT

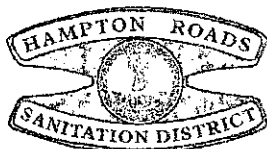
Project: Westmoreland Co - Montross WWTP
Customer Sample ID: Final Effluent
Project Code: WE_MONT
Sample Point: FNE
Sample Date: 03/12/09

Analyte	Method	Unit	Result	Report Limit ¹	Analyst	Analysis Date	Analysis Time
<u>Volatile Organics</u>							
Acrolein	EPA 624	ug/L	<10.0	10.0	SLOPEZ	03/15/09	18:12
Acrylonitrile	EPA 624	ug/L	<10.0	10.0	SLOPEZ	03/15/09	18:12
Benzene	EPA 624	ug/L	<10.0	10.0	SLOPEZ	03/15/09	18:12
Bromoform	EPA 624	ug/L	<10.0	10.0	SLOPEZ	03/15/09	18:12
Carbon Tetrachloride	EPA 624	ug/L	<10.0	10.0	SLOPEZ	03/15/09	18:12
Chlorodibromomethane	EPA 624	ug/L	<10.0	10.0	SLOPEZ	03/15/09	18:12
Chloroform	EPA 624	ug/L	<10.0	10.0	SLOPEZ	03/15/09	18:12
Dichlorobromomethane	EPA 624	ug/L	<10.0	10.0	SLOPEZ	03/15/09	18:12
1,2-Dichloroethane	EPA 624	ug/L	<10.0	10.0	SLOPEZ	03/15/09	18:12
1,1-Dichloroethylene	EPA 624	ug/L	<10.0	10.0	SLOPEZ	03/15/09	18:12
1,2-trans-Dichloroethylene	EPA 624	ug/L	<10.0	10.0	SLOPEZ	03/15/09	18:12
1,2-Dichloropropane	EPA 624	ug/L	<10.0	10.0	SLOPEZ	03/15/09	18:12
1,3-Dichloropropylene*	EPA 624	ug/L	<20.0	20.0	SLOPEZ	03/15/09	18:12
Ethylbenzene	EPA 624	ug/L	<10.0	10.0	SLOPEZ	03/15/09	18:12
Methyl Bromide	EPA 624	ug/L	<10.0	10.0	SLOPEZ	03/15/09	18:12
Methylene Chloride	EPA 624	ug/L	<10.0	10.0	SLOPEZ	03/15/09	18:12
Monochlorobenzene (Chlorobenzene)	EPA 624	ug/L	<10.0	10.0	SLOPEZ	03/15/09	18:12
1,1,2,2-Tetrachloroethane	EPA 624	ug/L	<10.0	10.0	SLOPEZ	03/15/09	18:12
Tetrachloroethylene	EPA 624	ug/L	<10.0	10.0	SLOPEZ	03/15/09	18:12
Toluene	EPA 624	ug/L	<10.0	10.0	SLOPEZ	03/15/09	18:12
1,1,2-Trichloroethane	EPA 624	ug/L	<10.0	10.0	SLOPEZ	03/15/09	18:12
Trichloroethylene (Trichloroethene)	EPA 624	ug/L	<10.0	10.0	SLOPEZ	03/15/09	18:12
Vinyl Chloride	EPA 624	ug/L	<10.0	10.0	SLOPEZ	03/15/09	18:12
<u>Acid Extractables</u>							
2-Chlorophenol	EPA 625	ug/L	<10.0	10.0	SLOPEZ	03/20/09	03:44
2,4-Dichlorophenol	EPA 625	ug/L	<10.0	10.0	SLOPEZ	03/20/09	03:44
2,4-Dimethylphenol	EPA 625	ug/L	<10.0	10.0	SLOPEZ	03/20/09	03:44
4,6-Dinitro-o-cresol	EPA 625	ug/L	<10.0	10.0	SLOPEZ	03/20/09	03:44
2,4-Dinitrophenol	EPA 625	ug/L	<10.0	10.0	SLOPEZ	03/20/09	03:44
Pentachlorophenol	EPA 625	ug/L	<10.0	10.0	SLOPEZ	03/20/09	03:44
Phenol	EPA 625	ug/L	<10.0	10.0	SLOPEZ	03/20/09	03:44
2,4,6-Trichlorophenol	EPA 625	ug/L	<10.0	10.0	SLOPEZ	03/20/09	03:44

Notes¹ Report Limit is lowest concentration at which quantitation is demonstrated.

ND - Sample concentration non-detectable.

*1,3-Dichloropropylene is the sum of cis-1,3-Dichloropropene and trans-1,3-Dichloropropene.

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ANALYTICAL REPORT

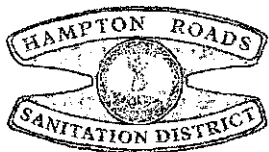
Project: Westmoreland Co - Montross WWTP
Customer Sample ID: Final Effluent
Project Code: WE_MONT
Sample Point: FNE
Sample Date: 03/12/09

Analyte	Method	Unit	Result	Report	Analyst	Analysis	Analysis Time
				Limit ¹		Date	
<u>Base Neutral Extractables</u>							
Acenaphthene	EPA 625	ug/L	<10.0	10.0	SLOPEZ	03/20/09	03:44
Anthracene	EPA 625	ug/L	<10.0	10.0	SLOPEZ	03/20/09	03:44
Benzo(a)anthracene	EPA 625	ug/L	<10.0	10.0	SLOPEZ	03/20/09	03:44
Benzo(a)pyrene	EPA 625	ug/L	<10.0	10.0	SLOPEZ	03/20/09	03:44
3,4 Benzofluoranthene (Benzo(b)fluoranthene)	EPA 625	ug/L	<10.0	10.0	SLOPEZ	03/20/09	03:44
Benzo(k)fluoranthene	EPA 625	ug/L	<10.0	10.0	SLOPEZ	03/20/09	03:44
Benzidine	EPA 625	ug/L	<10.0 ²	10.0	SLOPEZ	03/20/09	03:44
Bis-(2-chloroethyl)-ether	EPA 625	ug/L	<10.0	10.0	SLOPEZ	03/20/09	03:44
Bis-2-(chloroisopropyl) ether	EPA 625	ug/L	<10.0	10.0	SLOPEZ	03/20/09	03:44
Bis-2-ethyl hexyl phthalate	EPA 625	ug/L	<10.0	10.0	SLOPEZ	03/20/09	03:44
Butyl benzyl phthalate	EPA 625	ug/L	<10.0	10.0	SLOPEZ	03/20/09	03:44
2-Chloronaphthalene	EPA 625	ug/L	<10.0	10.0	SLOPEZ	03/20/09	03:44
Chrysene	EPA 625	ug/L	<10.0	10.0	SLOPEZ	03/20/09	03:44
Dibenzo(a,h) anthracene	EPA 625	ug/L	<10.0	10.0	SLOPEZ	03/20/09	03:44
Dibutyl phthalate (Di-n-butyl phthalate)	EPA 625	ug/L	<10.0	10.0	SLOPEZ	03/20/09	03:44
3,3-Dichlorobenzidine	EPA 625	ug/L	<10.0	10.0	SLOPEZ	03/20/09	03:44
Diethyl phthalate	EPA 625	ug/L	<10.0	10.0	SLOPEZ	03/20/09	03:44
Dimethyl phthalate	EPA 625	ug/L	<10.0	10.0	SLOPEZ	03/20/09	03:44
2,4-Dinitrotoluene	EPA 625	ug/L	<10.0	10.0	SLOPEZ	03/20/09	03:44
1,2-Diphenylhydrazine ³	EPA 625	ug/L	<10.0	10.0	SLOPEZ	03/20/09	03:44
Fluoranthene	EPA 625	ug/L	<10.0	10.0	SLOPEZ	03/20/09	03:44
Fluorene	EPA 625	ug/L	<10.0	10.0	SLOPEZ	03/20/09	03:44
Hexachlorobenzene	EPA 625	ug/L	<10.0	10.0	SLOPEZ	03/20/09	03:44
Hexachlorobutadiene	EPA 625	ug/L	<10.0	10.0	SLOPEZ	03/20/09	03:44
Hexachlorocyclopentadiene	EPA 625	ug/L	<10.0	10.0	SLOPEZ	03/20/09	03:44
Hexachloroethane	EPA 625	ug/L	<10.0	10.0	SLOPEZ	03/20/09	03:44
Indeno(1,2,3-cd)pyrene	EPA 625	ug/L	<10.0	10.0	SLOPEZ	03/20/09	03:44
Isophorone	EPA 625	ug/L	<10.0	10.0	SLOPEZ	03/20/09	03:44
Nitrobenzene	EPA 625	ug/L	<10.0	10.0	SLOPEZ	03/20/09	03:44
N-Nitrosodi-n-propyl amine	EPA 625	ug/L	<10.0	10.0	SLOPEZ	03/20/09	03:44
N-Nitrosodimethylamine	EPA 625	ug/L	<10.0	10.0	SLOPEZ	03/20/09	03:44
n-Nitrosodi-phenylamine ⁴	EPA 625	ug/L	<10.0	10.0	SLOPEZ	03/20/09	03:44
Nonylphenol	EPA 625	ug/L	<10.0	10.0	SLOPEZ	03/24/09	14:40
Pyrene	EPA 625	ug/L	<10.0	10.0	SLOPEZ	03/20/09	03:44
1,2,4 Trichlorobenzene	EPA 625	ug/L	<10.0	10.0	SLOPEZ	03/20/09	03:44

Notes¹ Report Limit is lowest concentration at which quantitation is demonstrated.

ND - Sample concentration non-detectable.

² The recovery of Benzidine in the Matrix Spike is below the in-house limit due to possible matrix interference. However, the recovery of Benzidine in the Laboratory Fortified Blank was within acceptable limits.³ 1,2-Diphenylhydrazine is converted to Azobenzene in extraction process.⁴ n-Nitrosodi-phenylamine decomposes in the injection port to Diphenylamine.

**HRSD**

P.O. BOX 5911, VIRGINIA BEACH, VIRGINIA 23471-0911 • (757) 460-4205 • FAX: (757) 460-6586

www.hrsd.com

ANALYTICAL REPORT

Project: Westmoreland Co - Montross WWTP
Customer Sample ID: Final Effluent
Project Code: WE_MONT
Sample Point: FNE
Sample Date: 03/12/09

Analyte	Method	Unit	Result	Report Limit ¹	Analyst	Analysis Date	Analysis Time
<u>Pesticides & PCB's</u>							
Aldrin	EPA 608	ug/L	<0.05	0.05	SLOPEZ	03/23/09	19:31
alpha-BHC (Hexachlorocyclohexane)	EPA 608	ug/L	<0.05	0.05	SLOPEZ	03/23/09	19:31
beta-BHC (Hexachlorocyclohexane)	EPA 608	ug/L	<0.05	0.05	SLOPEZ	03/23/09	19:31
Chlordane	EPA 608	ug/L	ND	0.20	SLOPEZ	03/23/09	19:31
4,4-DDD (DDD)	EPA 608	ug/L	<0.05	0.05	SLOPEZ	03/23/09	19:31
4,4-DDE (DDE)	EPA 608	ug/L	<0.05	0.05	SLOPEZ	03/23/09	19:31
4,4-DDT (DDT)	EPA 608	ug/L	<0.05	0.05	SLOPEZ	03/23/09	19:31
Dieldrin	EPA 608	ug/L	<0.05	0.05	SLOPEZ	03/23/09	19:31
Endosulfan I (Alpha-Endosulfan)	EPA 608	ug/L	<0.05	0.05	SLOPEZ	03/23/09	19:31
Endosulfan II (Beta-Endosulfan)	EPA 608	ug/L	<0.05	0.05	SLOPEZ	03/23/09	19:31
Endosulfan Sulfate	EPA 608	ug/L	<0.05	0.05	SLOPEZ	03/23/09	19:31
Endrin	EPA 608	ug/L	<0.05	0.05	SLOPEZ	03/23/09	19:31
Endrin aldehyde	EPA 608	ug/L	<0.05	0.05	SLOPEZ	03/23/09	19:31
Heptachlor	EPA 608	ug/L	<0.05	0.05	SLOPEZ	03/23/09	19:31
Heptachlor Epoxide	EPA 608	ug/L	<0.05	0.05	SLOPEZ	03/23/09	19:31
Lindane (Hexachlorocyclohexane)	EPA 608	ug/L	<0.05	0.05	SLOPEZ	03/23/09	19:31
Methoxychlor	EPA 608	ug/L	<0.05	0.05	SLOPEZ	03/23/09	19:31
Mirex	EPA 608	ug/L	<0.05	0.05	SLOPEZ	03/23/09	19:31
Kepone	EPA 608	ug/L	<0.80	0.80	SLOPEZ	03/24/09	20:21
PCB 1016	EPA 608	ug/L	ND	1.00	SLOPEZ	03/23/09	19:31
PCB 1221	EPA 608	ug/L	ND	1.00	SLOPEZ	03/23/09	19:31
PCB 1232	EPA 608	ug/L	ND	1.00	SLOPEZ	03/23/09	19:31
PCB 1242	EPA 608	ug/L	ND	1.00	SLOPEZ	03/23/09	19:31
PCB 1248	EPA 608	ug/L	ND	1.00	SLOPEZ	03/23/09	19:31
PCB 1254	EPA 608	ug/L	ND	1.00	SLOPEZ	03/23/09	19:31
PCB 1260	EPA 608	ug/L	ND	1.00	SLOPEZ	03/23/09	19:31
PCB Total	EPA 608	ug/L	ND	7.00	SLOPEZ	03/23/09	19:31
Toxaphene	EPA 608	ug/L	ND	5.00	SLOPEZ	03/23/09	19:31
<u>Organophosphorous Pesticides *</u>							
Diazinon	EPA 622	0.10 ug/L	<0.10	0.10	SLOPEZ	03/25/09	23:24
Demeton	EPA 622	0.10 ug/L	<0.10	0.10	SLOPEZ	03/20/09	17:29
Guthion	EPA 622	0.10 ug/L	<0.10	0.10	SLOPEZ	03/20/09	17:29
Malathion	EPA 622	0.10 ug/L	<0.10	0.10	SLOPEZ	03/20/09	17:29
Chlorpyrifos (Dursban)	EPA 622	0.10 ug/L	<0.10	0.10	SLOPEZ	03/20/09	17:29
Parathion	EPA 622	0.10 ug/L	<0.10	0.10	SLOPEZ	03/20/09	17:29

Notes¹ Report Limit is lowest concentration at which quantitation is demonstrated.

ND - Sample concentration non-detectable.

*One surrogate QC standard was above the in-house limits but was acceptable in the Laboratory Reagent Blank.

Authorization: Reelin ParnellDate: 3/30/09

QUALITY ASSURANCE REPORT

Level 1

Project: Westmoreland County
Project Code: WE_MONT_M
Sample Point: FB; FNE (TOTAL AND DISSOLVED)
Sample Date: 03/12/09

Analytical Run Information	Cr	Cu	Se	Zn	Sb	As	Cd	Pb	Hg	Ni	Ag	Tl
Method	200.8	200.8	200.8	200.8	200.8	200.7	200.8	200.8	245.1	200.8	200.8	200.8
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Method Detection Limit (MDL)	0.019	0.08	0.03	0.15	0.018	20	0.007	0.04	0.02	0.03	0.009	0.028
Report Limit (RL)	0.5	0.5	1.0	2	0.2	60	0.1	0.5	0.1	0.5	0.2	5
Average LRB	0.030*	<0.08	0.03*	0.40*	0.21^	<15	0.025*	<0.04	<0.02	<0.03	0.021*	0.036*
Total Metals	Cr	Cu	Se	Zn	Sb	As	Cd	Pb	Hg	Ni	Ag	Tl
Sample ID: WE_MONT_M FNE												
Matrix Spike Conc.	10.0	50	10.0	100								
MS Percent Recovery	92%	88%	93%	82%								
MSD Percent Recovery	96%	90%	96%	85%								
MS/MSD RPD	3	2	2	2								
Dissolved Metals	Cu	Se	Zn	Sb	As	Cd	Pb	Hg	Ni	Ag	Tl	
Sample ID: WE_MONT_M FNE												
Matrix Spike Conc.	50	10.0	100	5.0	200	1.0	10.0	1.0	10.0	10.0	10.0	20
MS Percent Recovery	87%	92%	84%	106%	102%	95%	101%	110%	82%	93%	104%	
MSD Percent Recovery	86%	93%	81%	104%	117%	96%	100%	106%	81%	94%	102%	
MS/MSD RPD	1	<1	2	1	13	<1	1	5	1	1	1	1

LRB - Laboratory Reagent Blank

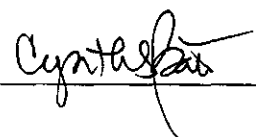
MS - Matrix Spike

MSD - Matrix Spike Duplicate

RPD - Relative Percent Difference

*Report Limit is lowest concentration at which quantitation is demonstrated. Values below report limit should not be used for compliance determination due to a high degree of uncertainty.

^LRB value did not meet Blank acceptance criteria.

Validated By: 

Date: 03/27/09

Montross WWTP Grab Field Sheet

Information checked before the start of sampling event:

1. Average of the last five days FNE flow 31 K
2. List the last five days FNE TSS data with the most recent last 3.3 on 2/2/09
_____, _____, _____
3. Sample event date and time 3/12/09 @
4. Does RWI have any abnormal characteristics (i.e., odor, color) ? Y / (N)
If yes was recorded for the above question, describe characteristics in the notes section below
5. Sampling personnel : Grimmer

Note: If the answer to any question is yes, contact project manager immediately

Information checked at the end of sampling

1. Are all lids, valves and caps secure ? (Y) N
2. FNE TSS for the sampling period unavailable
3. FB grab end time / date 3/12/09 @ 1045
4. FNE grab end time / date 3/12/09 @ 1115-1150

Note: If the answer to any question is NO, contact project manager immediately

Record any other circumstances which could affect the sample result:

march TSS data not available yet

Notes:



CENTRAL ENVIRONMENTAL LABORATORY

1432 AIR RAIL AVENUE
VIRGINIA BEACH, VA 23455TEL: 757-460-4214
FAX: 757-460-6586

CHAIN OF CUSTODY

PROJECT NAME/CODE: Westmoreland Co. Montross WWTP

ANALYSES REQUESTED, CGN & NUMBER OF CONTAINERS

HRSD Use Only		Circle One		Circle One		ANALYSES REQUESTED, CGN & NUMBER OF CONTAINERS										Project in Lims? Yes _____ No <u>X</u>			
CUSTOMER SAMPLE ID	PROJECT CODE	SAMPLE POINT	DATE	TIME	SAMPLED BY	MATRIX	SAMPLE TYPE	Total Metals (5)	Dissolved Metals (55)	Cyanide (4)	Sulfide (18)	Volatile 624 (10...101)	Semivol 625 (9...9m)	TBT (31...31b)	Cl (12)	HRSD Use Only	Pres'd Checked	CONT. COUNT	
	WE MONT	FB	3/12/2009	1045	LG	L	G	1	1									✓	2
	WE MONT	FNE	3/12/2009	1115	LG	L	G	1	1									✓	2
	WE MONT	FNE	3/12/2009	1150	LG	L	G			1		10						✓	11
	WE MONT	FNE	3/12/2009	1120	LG	L	G				1		14	3	1			✓	19
						L S	C G												
						L S	C G												
						L S	C G												
						L S	C G												
						L S	C G												
						L S	C G												
						L S	C G												

COMMENTS:

Temp. Requirement		*Preservatives	
Relinquished by / Signature <u>James Harmon</u>	Date/Time <u>3/13/09 7016</u>	*Hg, Metals (pH<2 - HNO3) (Clean metals check in section)	
Received by / Signature <u>M. L. Stone</u>	Date/Time <u>3/13/09 0707</u>	*O&G (pH<2 - HCl, check in section) & store ≤ 6 °C	
Relinquished by / Signature <u>M. L. Stone</u>	Date/Time <u>3/13/09 0707</u>	*CN (pH>12 - NaOH) & store ≤ 6 °C	
Received by / Signature <u>James Harmon</u>	Date/Time <u>3/13/09 0727</u>	*Sulfide (pH>9 - NaOH+ZnAc) & store ≤ 6 °C	
Relinquished by / Signature	Date/Time	*Micro (Na ₂ S ₂ O ₃ + EDTA) & store < 10 °C	
Received by / Signature	Date/Time	*COD, NUT, Phenols	
Relinquished by / Signature	Date/Time	*TOC (pH<2 - H ₃ PO ₄) & store ≤ 6 °C	
Received by / Signature	Date/Time	*BOD, TSS, TVSS, Turbidity, Surfactant, Sulfate store ≤ 6 °C	
		*NUT Non Acidified, Conductivity, Organics store ≤ 6 °C	
		*Cr (VI) (pH 9.3 - 9.7 - (NH ₄) ₂ SO ₄) & store ≤ 6 °C	
All sample(s) met proper *preservation requirements. Yes <u>✓</u> No _____		Int <u>MR</u>	

Sample Type: C=Composite, G=Grab

Matrix: L= Liquid, S= Solid

CGN: Container Group Number

NOTE: ALL APPLICABLE INFORMATION MUST BE COMPLETED PRIOR TO ACCEPTANCE.

April 8, 2009

Kathy Hobson
HRSD
1432 Air Rail Avenue
Virginia Beach, VA 23455

Dear Kathy:

The wastewater sample (WE_MONT FNE, 3-12-09) that you submitted on March 20, 2009 for tributyltin analysis was found to contain nondetectable TBT⁺, DBT⁺² and MBT⁺³ (limit of quantitation = 30 ng/L (pptr)).

This sample was extracted on April 3, 2009 and was analyzed by GC/FPD on April 7, 2009.

If you have any questions, please call me at 804-684-7654.

Sincerely,

Ellen Travelstead

Ellen Travelstead
TBT Project Supervisor



Laboratories LLC

a member of **The GEL Group** INC



PO Box 30712 Charleston, SC 29417
2040 Savage Road Charleston, SC 29407
P 843.556.8171 F 843.766.1178

www.gel.com

April 06, 2009

Kathy Hobson
Hampton Roads Sanitation District
Central Environmental Lab
1432 Air Rail Avenue
Virginia Beach, Virginia 23455

Re: Radiochemistry Analysis
Work Order: 226292

Dear Kathy Hobson:

GEL Laboratories, LLC (GEL) appreciates the opportunity to provide the enclosed analytical results for the sample(s) we received on March 17, 2009. This original data report has been prepared and reviewed in accordance with GEL's standard operating procedures.

Our policy is to provide high quality, personalized analytical services to enable you to meet your analytical needs on time every time. We trust that you will find everything in order and to your satisfaction. If you have any questions, please do not hesitate to call me at (843) 556-8171, ext. 4422.

Sincerely,


Jake Crook
Project Manager

Enclosures

Page: _____ of _____	GEL Chain of Custody and Analytical Request GEL Work Order Number: 22629270	GEL Laboratories, LLC
Project #: _____		2040 Savage Road
GEL Quote #: _____		Charleston, SC 29407
COC Number ⁽¹⁾ : _____		Phone: (843) 556-8171
PO Number: _____		Fax: (843) 766-1178

Client Name: <u>HRSD</u>	Phone #: <u>757-460-4233</u>	Sample Analysis Requested ⁽⁵⁾ (Fill in the number of containers for each test)
--------------------------	------------------------------	---

[illegible]

Address: 11137 N. 1st Ave - 1/4 Ranch 11A 23115

[illegible][illegible]

TAT Requested: Normal:	Rush:	Specify:	(Subject to Surcharge)	Fax Results:	Yes / No	Circle Deliverable: C of A / QC Summary / Level 1 / Level 2 / Level 3 / Level 4
------------------------	-------	----------	------------------------	--------------	----------	---

Remarks: Are there any known hazards applicable to these samples? If so, please list the hazards

See attached Information sheet.

Sample Collection Time Zone

Eastern Pacific

Central Other _____

Mountain

Chain of Custody Signatures			Sample Shipping and Delivery Details	
Relinquished By (Signed)	Date	Time	Received by (signed)	Date
1 <i>[Signature]</i>	3/13/09	1423	1 <i>R.M. Stelly</i>	3/17/09 0930
2			2	
3			3	

Sample Shipping and Delivery Details	
Method of Shipment: <i>UPS</i>	Date Shipped: <i>3/13/09</i>
Airbill #:	
Airbill #:	

<p>1.) Chain of Custody Number = Client Determined</p> <p>2.) QC Codes: N = Normal Sample, TB = Trip Blank, FD = Field Duplicate, EB = Equipment Blank, MS = Matrix Spike Sample, MSD = Matrix Spike Duplicate Sample, G = Grab, C = Composite</p> <p>3.) Field Filtered: For liquid matrices, indicate with a - Y - for yes the sample was field filtered or - N - for sample was not field filtered.</p> <p>4.) Matrix Codes: DW=Drinking Water, GW=Groundwater, SW=Surface Water, WW=Waste Water, W=Water, SO=Soil, SD=Sediment, SL=Sludge, SS=Solid Waste, O=Oil, F=Filter, P=Wipe, U=Urine, F=Fecal, N=Nasal</p> <p>5.) Sample Analysis Requested: Analytical method requested (i.e. 8260B, 6010B/7470A) and number of containers provided for each (i.e. 8260B - 3, 6010B/7470A - 1).</p> <p>6.) Preservative Type: HA = Hydrochloric Acid, NI = Nitric Acid, SH = Sodium Hydroxide, SA = Sulfuric Acid, AA = Ascorbic Acid, HX = Hexane, ST = Sodium Thiosulfate, If no preservative is added = leave field blank</p> <p>WHITE = LABORATORY YELLOW = FIELD PINK = CLIENT</p>	<p>For Lab Receiving Use Only</p> <p>Custody Seal Intact? <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO</p> <p>Cooler Temp: 11 C</p>
--	--

SAMPLE RECEIPT & REVIEW FORM

Client: <u>HRSD</u>		SDG/ARCOC/Work Order: <u>226292</u>	
Received By: <u>RMS</u>		Date Received: <u>3/17/09</u>	
Suspected Hazard Information	Yes	No	*If Counts > x2 area background on samples not marked "radioactive", contact the Radiation Safety Group of further investigation.
COC/Samples marked as radioactive?		<input checked="" type="checkbox"/>	Maximum Counts Observed*:
Classified Radioactive II or III by RSO?		<input checked="" type="checkbox"/>	<u>20 cpm</u>
COC/Samples marked containing PCBs?		<input checked="" type="checkbox"/>	
Shipped as a DOT Hazardous?		<input checked="" type="checkbox"/>	Hazard Class Shipped: UN#:
Samples identified as Foreign Soil?		<input checked="" type="checkbox"/>	

Sample Receipt Criteria	Yes	NA	No	Comments/Qualifiers (Required for Non-Conforming Items)
1 Shipping containers received intact and sealed?	<input checked="" type="checkbox"/>			Circle Applicable: seals broken damaged container leaking container other (describe)
2 Samples requiring cold preservation within 0 ≤ 6 deg. C?		<input checked="" type="checkbox"/>		ice bags blue ice dry ice <u>none</u> other (describe) <u>11</u>
3 Chain of custody documents included with shipment?	<input checked="" type="checkbox"/>			
4 Sample containers intact and sealed?	<input checked="" type="checkbox"/>			Circle Applicable: seals broken damaged container leaking container other (describe)
5 Samples requiring chemical preservation at proper pH?	<input checked="" type="checkbox"/>			Sample ID's, containers affected and observed pH: If Preservation added, Lot#:
6 VOA vials free of headspace (defined as < 6mm bubble)?		<input checked="" type="checkbox"/>		Sample ID's and containers affected:
7 Are Encore containers present?			<input checked="" type="checkbox"/>	(If yes, immediately deliver to Volatiles laboratory)
8 Samples received within holding time?	<input checked="" type="checkbox"/>			ID's and tests affected:
9 Sample ID's on COC match ID's on bottles?	<input checked="" type="checkbox"/>			Sample ID's and containers affected:
10 Date & time on COC match date & time on bottles?	<input checked="" type="checkbox"/>			Sample ID's affected:
11 Number of containers received match number indicated on COC?	<input checked="" type="checkbox"/>			Sample ID's affected:
12 COC form is properly signed in relinquished/received sections?	<input checked="" type="checkbox"/>			

Comments:

UPS: 1Z 282 365 03 0004 6642

GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 – (843) 556-8171 – www.gel.com

Certificate of Analysis Report for

HRSD001 Hampton Roads Sanitation District

Client SDG: 226292 GEL Work Order: 226292

The Qualifiers in this report are defined as follows:

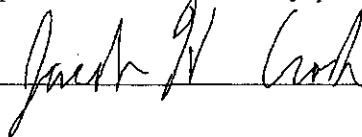
- * A quality control analyte recovery is outside of specified acceptance criteria
- ** Analyte is a surrogate compound
- U Analyte was analyzed for, but not detected above the MDL, MDA, or LOD.
- UI Gamma Spectroscopy—Uncertain identification

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless qualified on the Certificate of Analysis.

The designation ND, if present, appears in the result column when the analyte concentration is not detected above the detection limit.

This data report has been prepared and reviewed in accordance with GEL Laboratories LLC standard operating procedures. Please direct any questions to your Project Manager, Jake Crook.

Reviewed by



GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Company : Hampton Roads Sanitation District
Address : Central Environmental Lab
1432 Air Rail Avenue
Virginia Beach, Virginia 23455
Contact: Kathy Hobson
Project: Radiochemistry Analysis

Report Date: April 6, 2009

Client Sample ID: WE_MONT FNE
Sample ID: 226292001
Matrix: Waste Water
Collect Date: 12-MAR-09 11:20
Receive Date: 17-MAR-09
Collector: Client

Project: HRSD00104
Client ID: HRSD001

Parameter	Qualifier	Result	Uncertainty	DL	RL	Units	DF	AnalystDate	Time	Batch	Method
Rad Gamma Spec Analysis											
<i>Gammascpec, Gamma, Liquid (Standard List) "As Received"</i>											
Actinium-228	U	ND	+/-8.92	14.0	20.0	pCi/L		KXG3 03/27/09 0828 853411		I	
Americium-241	U	ND	+/-16.7	24.6	25.0	pCi/L					
Antimony-124	U	ND	+/-5.90	10.3	5.00	pCi/L					
Antimony-125	U	ND	+/-5.77	9.47	10.0	pCi/L					
Barium-133	U	ND	+/-3.13	4.92	5.00	pCi/L					
Barium-140	U	ND	+/-16.0	27.7	30.0	pCi/L					
Beryllium-7	U	ND	+/-20.8	36.9	50.0	pCi/L					
Bismuth-212	U	ND	+/-18.1	29.3	50.0	pCi/L					
Bismuth-214	U	ND	+/-6.30	8.78	10.0	pCi/L					
Cerium-139	U	ND	+/-2.22	3.67	5.00	pCi/L					
Cerium-141	U	ND	+/-5.07	7.88	10.0	pCi/L					
Cerium-144	U	ND	+/-18.7	27.7	50.0	pCi/L					
Cesium-134	U	ND	+/-2.41	4.21	5.00	pCi/L					
Cesium-136	U	ND	+/-5.62	10.2	15.0	pCi/L					
Cesium-137	U	ND	+/-2.41	4.05	5.00	pCi/L					
Chromium-51	U	ND	+/-24.9	43.9	50.0	pCi/L					
Cobalt-56	U	ND	+/-2.42	4.28	5.00	pCi/L					
Cobalt-57	U	ND	+/-2.14	3.60	5.00	pCi/L					
Cobalt-58	U	ND	+/-2.21	4.08	10.0	pCi/L					
Cobalt-60	U	ND	+/-2.18	3.12	5.00	pCi/L					
Europium-152	U	ND	+/-6.72	11.7	20.0	pCi/L					
Europium-154	U	ND	+/-5.55	9.96	20.0	pCi/L					
Europium-155	U	ND	+/-8.97	15.2	20.0	pCi/L					
Iridium-192	U	ND	+/-2.48	4.03	10.0	pCi/L					
Iron-59	U	ND	+/-5.34	9.12	10.0	pCi/L					
Lead-210	U	ND	+/-415	728	750	pCi/L					
Lead-212	U	ND	+/-7.91	7.74	15.0	pCi/L					
Lead-214	U	ND	+/-6.00	8.96	10.0	pCi/L					
Manganese-54	U	ND	+/-1.97	3.33	5.00	pCi/L					
Mercury-203	U	ND	+/-2.70	4.46	5.00	pCi/L					
Neodymium-147	U	ND	+/-34.2	58.9	100	pCi/L					
Neptunium-239	U	ND	+/-16.1	26.8	25.0	pCi/L					
Niobium-94	U	ND	+/-2.04	2.99	5.00	pCi/L					
Niobium-95	U	ND	+/-2.44	4.18	5.00	pCi/L					
Potassium-40	U	ND	+/-32.5	53.6	100	pCi/L					
Promethium-144	U	ND	+/-2.11	3.22	5.00	pCi/L					
Promethium-146	U	ND	+/-2.77	4.59	5.00	pCi/L					
Radium-228	U	ND	+/-8.92	14.0	20.0	pCi/L					

GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Company : Hampton Roads Sanitation District
Address : Central Environmental Lab
1432 Air Rail Avenue
Virginia Beach, Virginia 23455
Contact: Kathy Hobson
Project: Radiochemistry Analysis

Report Date: April 6, 2009

Client Sample ID: WE_MONT FNE
Sample ID: 226292001

Project: HRSD00104
Client ID: HRSD001

Parameter	Qualifier	Result	Uncertainty	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Gamma Spec Analysis												
<i>GammaSpec, Gamma, Liquid (Standard List) "As Received"</i>												
Ruthenium-106	U	ND	+/-20.6	33.3	50.0	pCi/L						
Silver-110m	U	ND	+/-2.15	3.86	5.00	pCi/L						
Sodium-22	U	ND	+/-1.98	3.55	5.00	pCi/L						
Thallium-208	U	ND	+/-2.80	4.25	10.0	pCi/L						
Thorium-230	U	ND	+/-4110	1950	20.0	pCi/L						
Thorium-234	U	ND	+/-218	229	250	pCi/L						
Tin-113	U	ND	+/-3.02	5.09	10.0	pCi/L						
Uranium-235	U	ND	+/-19.4	28.1	50.0	pCi/L						
Uranium-238	UI	ND	+/-218	185	250	pCi/L						
Yttrium-88	U	ND	+/-2.50	4.81	10.0	pCi/L						
Zinc-65	U	ND	+/-4.56	6.67	10.0	pCi/L						
Zirconium-95	U	ND	+/-3.95	6.89	10.0	pCi/L						
Rad Gas Flow Proportional Counting												
<i>GFPC, Gross A/B, liquid "As Received"</i>												
Alpha	U	ND	+/-1.46	2.73	3.00	pCi/L						
Beta		8.62	+/-2.20	2.16	4.00	pCi/L		DXB5	03/26/09	2002	851881	2
<i>GFPC, Sr90, liquid "As Received"</i>												
Strontium-90	U	ND	+/-0.850	1.48	2.00	pCi/L		BXF1	03/26/09	1720	851901	3
Rad Liquid Scintillation Analysis												
<i>LSC, Tritium Dist, Liquid "As Received"</i>												
Tritium	U	ND	+/-265	518	700	pCi/L		SXL4	03/27/09	0816	851923	4

The following Analytical Methods were performed

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0	
3	EPA 905.0 Modified	
4	EPA 906.0 Modified	

Surrogate/Tracer recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Strontium Carrier	GFPC, Sr90, liquid "As Received"			81	(25%-125%)

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QC Summary

Report Date: April 6, 2009
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Hampton Roads Sanitation District
Central Environmental Lab
1432 Air Rail Avenue
Virginia Beach, Virginia

Contact: Kathy Hobson

Workorder: 226292

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Rad Gamma Spec											
Batch	853411										
QC1201805070	226292001	DUP									
Actinium-228	U	-0.23	U	0.0696	pCi/L	373		N/A	KXG3	03/27/09	12:49
		+/-8.92		+/-10.7							
Americium-241	U	-5.94	U	-13.2	pCi/L	76		N/A			
		+/-16.7		+/-16.5							
Antimony-124	U	0.945	U	-1.52	pCi/L	856		N/A			
		+/-5.90		+/-6.12							
Antimony-125	U	-2.11	U	2.29	pCi/L	4780		N/A			
		+/-5.77		+/-6.04							
Barium-133	U	-3.45	U	-2.3	pCi/L	40		N/A			
		+/-3.13		+/-3.39							
Barium-140	U	8.45	U	15.2	pCi/L	57		N/A			
		+/-16.0		+/-18.5							
Beryllium-7	U	13.8	U	-2.09	pCi/L	272		N/A			
		+/-20.8		+/-22.6							
Bismuth-212	U	-2.61	U	1.44	pCi/L	691		N/A			
		+/-18.1		+/-19.0							
Bismuth-214	U	8.50	U	1.69	pCi/L	134		N/A			
		+/-6.30		+/-7.56							
Cerium-139	U	-0.201	U	-0.0687	pCi/L	98		N/A			
		+/-2.22		+/-2.53							
Cerium-141	U	4.66	U	-1.09	pCi/L	322		N/A			
		+/-5.07		+/-6.11							
Cerium-144	U	1.76	U	6.29	pCi/L	112		N/A			
		+/-18.7		+/-17.7							
Cesium-134	U	0.394	U	2.14	pCi/L	138		N/A			
		+/-2.41		+/-2.82							
Cesium-136	U	3.26	U	-1.95	pCi/L	794		N/A			
		+/-5.62		+/-6.30							
Cesium-137	U	0.417	U	-0.936	pCi/L	521		N/A			
		+/-2.41		+/-2.35							
Chromium-51	U	10.9	U	0.708	pCi/L	176		N/A			
		+/-24.9		+/-26.5							
Cobalt-56	U	0.862	U	0.0423	pCi/L	181		N/A			
		+/-2.42		+/-2.26							
Cobalt-57	U	-0.0741	U	-0.196	pCi/L	90		N/A			
		+/-2.14		+/-2.20							
Cobalt-58	U	1.67	U	1.52	pCi/L	10		N/A			
		+/-2.21		+/-2.09							
Cobalt-60	U	-1.71	U	0.528	pCi/L	378		N/A			

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Rad Gamma Spec											
Batch 853411											
		+/-2.18		+/-2.49							
Europium-152	U	2.26	U	1.43	pCi/L	45		N/A	KXG3	03/27/09	12:49
		+/-6.72		+/-6.75							
Europium-154	U	2.61	U	1.27	pCi/L	69		N/A			
		+/-5.55		+/-6.82							
Europium-155	U	0.432	U	-7.09	pCi/L	226		N/A			
		+/-8.97		+/-9.54							
Iridium-192	U	-2.2	U	0.0325	pCi/L	206		N/A			
		+/-2.48		+/-2.49							
Iron-59	U	0.680	U	-3.74	pCi/L	289		N/A			
		+/-5.34		+/-5.22							
Lead-210	U	181	U	74.0	pCi/L	84		N/A			
		+/-415		+/-445							
Lead-212	U	0.682	U	1.02	pCi/L	40		N/A			
		+/-7.91		+/-6.76							
Lead-214	U	1.21	U	1.89	pCi/L	44		N/A			
		+/-6.00		+/-6.05							
Manganese-54	U	-0.206	U	1.78	pCi/L	252		N/A			
		+/-1.97		+/-2.39							
Mercury-203	U	-2.01	U	1.38	pCi/L	1080		N/A			
		+/-2.70		+/-3.06							
Neodymium-147	U	10.4	U	-27.9	pCi/L	439		N/A			
		+/-34.2		+/-38.1							
Neptunium-239	U	-4.76	U	-14.3	pCi/L	100		N/A			
		+/-16.1		+/-17.1							
Niobium-94	U	-1.95	U	-0.388	pCi/L	134		N/A			
		+/-2.04		+/-2.09							
Niobium-95	U	0.845	U	1.33	pCi/L	44		N/A			
		+/-2.44		+/-2.76							
Potassium-40	U	14.8	U	24.0	pCi/L	47		N/A			
		+/-32.5		+/-54.1							
Promethium-144	U	-1.48	U	-0.146	pCi/L	164		N/A			
		+/-2.11		+/-2.37							
Promethium-146	U	-0.576	U	0.960	pCi/L	801		N/A			
		+/-2.77		+/-3.15							
Radium-228	U	-0.23	U	0.0696	pCi/L	373		N/A			
		+/-8.92		+/-10.7							
Ruthenium-106	U	-5.47	U	-22.9	pCi/L	123		N/A			
		+/-20.6		+/-22.0							
Silver-110m	U	1.82	U	2.39	pCi/L	27		N/A			
		+/-2.15		+/-2.09							
Sodium-22	U	0.902	U	0.455	pCi/L	66		N/A			
		+/-1.98		+/-2.44							
Thallium-208	U	-1.65	U	-1.55	pCi/L	6		N/A			

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Rad Gamma Spec											
Batch	853411										
		+/-2.80		+/-3.30							
Thorium-230	U	616	U	-626	pCi/L	23000		N/A	KXG3	03/27/09	12:49
		+/-4110		+/-4130							
Thorium-234	U	227	U	-249	pCi/L	4310		N/A			
		+/-218		+/-165							
Tin-113	U	-0.379	U	-0.387	pCi/L	2		N/A			
		+/-3.02		+/-3.09							
Uranium-235	U	7.84	U	-18.4	pCi/L	498		N/A			
		+/-19.4		+/-21.3							
Uranium-238	UI	0.00	U	-249	pCi/L	4310		N/A			
		+/-218		+/-165							
Yttrium-88	U	2.03	U	-0.0051	pCi/L	201		N/A			
		+/-2.50		+/-2.45							
Zinc-65	U	-4.12	U	-0.32	pCi/L	171		N/A			
		+/-4.56		+/-4.87							
Zirconium-95	U	2.00	U	0.409	pCi/L	132		N/A			
		+/-3.95		+/-4.36							
QC1201805072	LCS										
Actinium-228			U	8.50	pCi/L					03/27/09	13:20
				+/-42.3							
Americium-241	1240			1340	pCi/L		108	(75%-125%)			
				+/-209							
Antimony-124			U	0.290	pCi/L						
				+/-8.12							
Antimony-125			U	46.9	pCi/L						
				+/-25.6							
Barium-133			U	-1.26	pCi/L						
				+/-9.88							
Barium-140			U	-27.5	pCi/L						
				+/-31.6							
Beryllium-7			U	-24.5	pCi/L						
				+/-74.8							
Bismuth-212			U	32.5	pCi/L						
				+/-62.6							
Bismuth-214			U	12.0	pCi/L						
				+/-16.7							
Cerium-139			U	0.564	pCi/L						
				+/-6.60							
Cerium-141			U	12.4	pCi/L						
				+/-11.8							
Cerium-144			U	-74.3	pCi/L						
				+/-52.4							
Cesium-134			U	3.17	pCi/L						
				+/-10.7							

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Rad Gamma Spec											
Batch	853411										
Cesium-136			U	-1.49 +/-16.1	pCi/L						
Cesium-137	441			452 +/-38.1	pCi/L		103	(75%-125%)	KXG3	03/27/09	13:20
Chromium-51			U	-3.62 +/-67.6	pCi/L						
Cobalt-56			U	2.27 +/-8.92	pCi/L						
Cobalt-57				47.7 +/-12.9	pCi/L						
Cobalt-58			U	-3.56 +/-8.66	pCi/L						
Cobalt-60	558			533 +/-54.3	pCi/L		96	(75%-125%)			
Europium-152			U	12.2 +/-23.2	pCi/L						
Europium-154			U	-2.3 +/-17.4	pCi/L						
Europium-155			U	-12.7 +/-27.7	pCi/L						
Iridium-192			U	0.726 +/-7.48	pCi/L						
Iron-59			U	-15 +/-20.7	pCi/L						
Lead-210			U	-936 +/-1850	pCi/L						
Lead-212			U	-0.294 +/-13.7	pCi/L						
Lead-214			U	7.19 +/-17.0	pCi/L						
Manganese-54			U	-2.38 +/-9.00	pCi/L						
Mercury-203			U	-7.82 +/-7.66	pCi/L						
Neodymium-147			U	-6.65 +/-56.5	pCi/L						
Neptunium-239			U	21.3 +/-55.2	pCi/L						
Niobium-94			U	2.34 +/-7.58	pCi/L						
Niobium-95			U	-6.28 +/-8.16	pCi/L						
Potassium-40			U	-51 +/-50.6	pCi/L						
Promethium-144			U	1.82	pCi/L						

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Rad Gamma Spec											
Batch 853411											
Promethium-146			U	+/-7.62 -0.395	pCi/L				KXG3	03/27/09	13:20
Radium-228			U	+/-11.1 8.50	pCi/L						
Ruthenium-106			U	+/-42.3 8.04	pCi/L						
Silver-110m				+/-74.9 19.9	pCi/L						
Sodium-22			U	+/-10.3 -0.271	pCi/L						
Thallium-208			U	+/-6.06 -2.38	pCi/L						
Thorium-230			U	+/-7.85 1400	pCi/L						
Thorium-234			U	+/-9690 -428	pCi/L						
Tin-113			U	+/-500 6.67	pCi/L						
Uranium-235			U	+/-10.4 -7.55	pCi/L						
Uranium-238			U	+/-53.1 -428	pCi/L						
Yttrium-88			U	+/-500 5.23	pCi/L						
Zinc-65			U	+/-6.29 5.70	pCi/L						
Zirconium-95			U	+/-19.9 7.36	pCi/L						
QC1201805069	MB			+/-15.1							
Actinium-228			U	7.91	pCi/L					03/27/09	08:47
Americium-241			U	+/-10.4 2.33	pCi/L						
Antimony-124			U	+/-14.2 -1.39	pCi/L						
Antimony-125			U	+/-4.70 -3.2	pCi/L						
Barium-133			U	+/-6.16 -4.34	pCi/L						
Barium-140			U	+/-3.23 5.35	pCi/L						
Beryllium-7			U	+/-9.56 -6.41	pCi/L						
				+/-17.9							

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Rad Gamma Spec											
Batch	853411										
Bismuth-212			U	0.777 +/-17.7	pCi/L						
Bismuth-214			U	-3.83 +/-6.04	pCi/L				KXG3	03/27/09	08:47
Cerium-139			U	0.594 +/-2.09	pCi/L						
Cerium-141			U	0.963 +/-4.12	pCi/L						
Cerium-144			U	-2.34 +/-14.5	pCi/L						
Cesium-134			U	-0.524 +/-2.70	pCi/L						
Cesium-136			U	4.02 +/-3.30	pCi/L						
Cesium-137			U	0.363 +/-2.44	pCi/L						
Chromium-51			U	-5.75 +/-18.5	pCi/L						
Cobalt-56			U	-3.27 +/-2.27	pCi/L						
Cobalt-57			U	0.555 +/-1.85	pCi/L						
Cobalt-58			U	0.677 +/-1.90	pCi/L						
Cobalt-60			U	1.13 +/-2.46	pCi/L						
Europium-152			U	-3.01 +/-6.98	pCi/L						
Europium-154			U	-0.309 +/-5.97	pCi/L						
Europium-155			U	3.65 +/-7.86	pCi/L						
Iridium-192			U	1.43 +/-2.15	pCi/L						
Iron-59			U	-0.537 +/-3.64	pCi/L						
Lead-210			U	-19.4 +/-396	pCi/L						
Lead-212			U	-2.19 +/-5.16	pCi/L						
Lead-214			U	0.931 +/-6.10	pCi/L						
Manganese-54			U	1.80 +/-2.24	pCi/L						
Mercury-203			U	0.291	pCi/L						

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Rad Gamma Spec											
Batch 853411											
Neodymium-147											
			U	+/-2.44 7.93	pCi/L				KXG3	03/27/09	08:47
Neptunium-239											
			U	+/-17.4 -0.255	pCi/L						
Niobium-94											
			U	+/-14.8 -0.26	pCi/L						
Niobium-95											
			U	+/-2.23 1.07	pCi/L						
Potassium-40											
			UI	+/-2.48 0.00	pCi/L						
Promethium-144											
			U	+/-32.1 0.0328	pCi/L						
Promethium-146											
			U	+/-2.45 -1.59	pCi/L						
Radium-228											
			U	+/-2.86 7.91	pCi/L						
Ruthenium-106											
			U	+/-10.4 -7.46	pCi/L						
Silver-110m											
			U	+/-21.1 -1.49	pCi/L						
Sodium-22											
			U	+/-2.30 -0.0786	pCi/L						
Thallium-208											
			U	+/-2.13 0.228	pCi/L						
Thorium-230											
			U	+/-3.04 527	pCi/L						
Thorium-234											
			U	+/-3490 51.1	pCi/L						
Tin-113											
			U	+/-179 -0.0573	pCi/L						
Uranium-235											
			U	+/-2.86 -10.4	pCi/L						
Uranium-238											
			U	+/-18.9 51.1	pCi/L						
Yttrium-88											
			U	+/-179 0.902	pCi/L						
Zinc-65											
			U	+/-2.26 -3.4	pCi/L						
Zirconium-95											
			U	+/-4.54 2.25	pCi/L						
				+/-3.90							

Rad Gas Flow

Batch 851881

QC1201801603 226292001 DUP

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Rad Gas Flow											
Batch	851881										
Alpha		U	0.611	U	0.181	pCi/L	0		N/A DXB5	03/26/09	20:03
			+/-1.46		+/-1.11						
Beta			8.62		11.4	pCi/L	28	(0% - 100%)			
			+/-2.20		+/-2.34						
QC1201801606	LCS										
Alpha	77.9				95.4	pCi/L		122 (75%-125%)		03/26/09	20:03
					+/-9.05						
Beta	262				265	pCi/L		101 (75%-125%)			
					+/-10.4						
QC1201801602	MB										
Alpha				U	0.203	pCi/L				03/26/09	20:03
					+/-0.751						
Beta					2.47	pCi/L					
					+/-1.39						
QC1201801604	226292001 MS										
Alpha	468	U	0.611		597	pCi/L		128* (75%-125%)		03/26/09	20:03
			+/-1.46		+/-59.7						
Beta	1570		8.62		1810	pCi/L		115 (75%-125%)			
			+/-2.20		+/-69.7						
QC1201801605	226292001 MSD										
Alpha	468	U	0.611		562	pCi/L	6	120 (0%-20%)		03/26/09	20:03
			+/-1.46		+/-58.9						
Beta	1570		8.62		1750	pCi/L	3	111 (0%-20%)			
			+/-2.20		+/-66.9						
Batch	851901										
QC1201801682	226365001 DUP										
Strontium-90		U	0.514	U	0.503	pCi/L	0		N/A BXF1	03/26/09	18:01
			+/-0.693		+/-0.773						
QC1201801684	LCS										
Strontium-90	65.5				67.4	pCi/L		103 (75%-125%)		03/26/09	18:01
					+/-2.80						
QC1201801681	MB										
Strontium-90				U	-0.0837	pCi/L				03/26/09	18:01
					+/-0.604						
QC1201801683	226365001 MS										
Strontium-90	131	U	0.514		75.3	pCi/L		58* (75%-125%)		03/26/09	18:01
			+/-0.693		+/-4.19						
Rad Liquid Scintillation											
Batch	851923										
QC1201801725	226292001 DUP										
Tritium		U	-168	U	-59	pCi/L	0		N/A SXL4	03/27/09	09:38
			+/-265		+/-273						
QC1201801727	LCS										
Tritium	2370				1920	pCi/L		81 (75%-125%)		03/27/09	10:10
					+/-425						
QC1201801724	MB										
Tritium				U	108	pCi/L				03/27/09	09:21

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Rad Liquid Scintillation											
Batch 851923											
				+/-292							
QC1201801726 226292001 MS											
Tritium	2380	U	-168	2570	pCi/L		108	(75%-125%)	SXL4	03/27/09	09:54
				+/-265	+/-477						

Notes:

The Qualifiers in this report are defined as follows:

- ** Analyte is a surrogate compound
- < Result is less than value reported
- > Result is greater than value reported
- A The TIC is a suspected aldol-condensation product
- B For General Chemistry and Organic analysis the target analyte was detected in the associated blank.
- BD Results are either below the MDC or tracer recovery is low
- C Analyte has been confirmed by GC/MS analysis
- D Results are reported from a diluted aliquot of the sample
- F Estimated Value
- H Analytical holding time was exceeded
- J Value is estimated
- M M if above MDC and less than LLD
- M Matrix Related Failure
- N/A RPD or %Recovery limits do not apply.
- ND Analyte concentration is not detected above the detection limit
- NJ Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
- R Sample results are rejected
- U Analyte was analyzed for, but not detected above the MDL, MDA, or LOD.
- UI Gamma Spectroscopy--Uncertain identification
- X Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
- Y QC Samples were not spiked with this compound
- ^ RPD of sample and duplicate evaluated using +/-RL. Concentrations are <5X the RL. Qualifier Not Applicable for Radiochemistry.
- h Preparation or preservation holding time was exceeded

GEL LABORATORIES LLC

2040 Savage Road Charleston, SC 29407 - (843) 556-8171 - www.gel.com

QC Summary

Workorder: 226292

Page 10 of 10

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
----------	-----	--------	------	----	-------	------	------	-------	-------	------	------

N/A indicates that spike recovery limits do not apply when sample concentration exceeds spike conc. by a factor of 4 or more.

^ The Relative Percent Difference (RPD) obtained from the sample duplicate (DUP) is evaluated against the acceptance criteria when the sample is greater than five times (5X) the contract required detection limit (RL). In cases where either the sample or duplicate value is less than 5X the RL, a control limit of +/- the RL is used to evaluate the DUP result.

* Indicates that a Quality Control parameter was not within specifications.

For PS, PSD, and SDILT results, the values listed are the measured amounts, not final concentrations.

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless qualified on the QC Summary.

COMPANY - WIDE NONCONFORMANCE REPORT

Mo. Day Yr. 03-APR-09	Division: Radiochemistry	Quality Criteria: Specifications	Type: Process
Instrument Type: GFPC	Test / Method: EPA 905.0 Modified	Matrix Type: Liquid	Client Code: ALSV, HRSD, URSC
Batch ID: 851901	Sample Numbers: See Below		
Potentially affected work order(s)(SDG): 226292, 226365, 226368 Application Issues: Failed Recovery for MS/PS			
Specification and Requirements		NRG Disposition:	
Nonconformance Description: 1. Matrix spike 1201801683 did not meet the recovery requirement due to the matrix of the sample. The sample was very oily, cloudy, and with strong odor. After leaching the sample, yellow salt-like crystals were noticed.		2. Reporting results.	

Originator's Name:

Layota Yom 04-APR-09

Data Validator/Group Leader:

Heather McCarty 06-APR-09

Quality Review:

Director:

COMPANY – WIDE NONCONFORMANCE REPORT			
Mo.Day Yr. 06-APR-09	Division: Radiochemistry	Quality Criteria: Specifications	Type: Process
Instrument Type: GFPC	Test / Method: EPA 900.0	Matrix Type: Liquid	Client Code: HRSD,URSC
Batch ID: 851881	Sample Numbers: See Below		
Potentially affected work order(s)(SDG): 226292,226365 Application Issues: Failed Recovery for MS/PS			
Specification and Requirements		NRG Disposition:	
Nonconformance Description:			
1. Matrix Spike 1201801604 did not meet the alpha recovery requirement. The matrix spike duplicate 1201801605 did meet the alpha recovery requirement. Relative percent difference between the matrix spike and the matrix spike duplicate is 6%.		1. Reporting Results.	

Originator's Name:
Takesha Mungo 06-APR-09

Data Validator/Group Leader:
Heather McCarty 06-APR-09

Quality Review:

Director:

List of current GEL Certifications as of 06 April 2009

State	Certification
Arizona	AZ0668
Arkansas	88-0651
CLIA	42D0904046
California – NELAP	01151CA
Colorado	GEL
Connecticut	PH-0169
Dept. of Navy	NFESC 413
EPA Region 5	WG-15J
Florida – NELAP	E87156
Georgia	E87156 (FL/NELAP)
Georgia DW	967
Hawaii	N/A
ISO 17025	2567.01
Idaho	SC00012
Illinois – NELAP	200029
Indiana	C-SC-01
Kansas – NELAP	E-10332
Kentucky	90129
Louisiana – NELAP	03046
Maryland	270
Massachusetts	M-SC012
Nevada	SC00012
New Jersey – NELAP	SC002
New Mexico	FL NELAP E87156
New York – NELAP	11501
North Carolina	233
North Carolina DW	45709
Oklahoma	9904
Pennsylvania – NELAP	68-00485
South Carolina	10120001/10120002
Tennessee	TN 02934
Texas – NELAP	T104704235-07B-TX
U.S. Dept. of Agriculture	S-52597
Utah – NELAP	GEL
Vermont	VT87156
Virginia	00151
Washington	C1641



HRSD

P.O. BOX 5902, VIRGINIA BEACH, VIRGINIA 23471-0902 • (757) 460-7045 • FAX: (757) 460-3985

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Commissioners

R. Tyler Bland, III
Chair

Vishnu K. Lakdawala, PhD
Vice-Chair

Parris D. Carson

B. Anne Davis

Douglas E. Miller

Frederick N. Elofson, CPA, PFS

Gerald S. Johnson

Michael E. Glenn

March 30, 2009

Norm Risavi
County Administrator
Westmoreland County
P.O. Box 1000
Montross, VA 22520

RECEIVED

MAR 31 2009

RE: MONTHLY METALS

Serving the Cities of

Chesapeake

Hampton

Newport News

Norfolk

Poquoson

Portsmouth

Suffolk

Virginia Beach

Williamsburg

Dear Norm:

Enclosed are the analytical results, QA report and chain of custody record for the March 12, 2009 sampling event.

Data has been emailed to Kevin Spruth at the Montross WWTP.

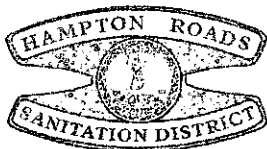
Should you have any questions, please feel free to contact me at (757) 460-4247.

Sincerely,

Daniel L. Barker
Environmental Scientist

DLB/cmr

Enclosures

**HRSD**

P.O. BOX 5911, VIRGINIA BEACH, VIRGINIA 23471-0911 • (757) 460-4205 • FAX: (757) 460-6586

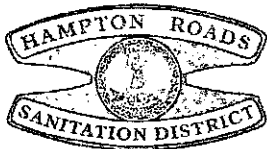
www.hrsd.com

ANALYTICAL REPORT

Project: Westmoreland Cty - Montross WWTP
Customer Sample ID: Field Blank
Sample Number: 931417
Project Code: WE_MONT_M
Sample Point: FB
Sample Date: 03/12/09

Analyte	Method	Unit	Result	Report Limit ¹	Regulatory Report		Analyst	Analysis Date	Analysis Time
					Limit ²				
Copper Total	EPA200.8	ug/L	< 0.5	0.5	7.3		CBATO	03/25/09	11:34
Zinc Total	EPA200.8	ug/L	<2	2	68		CBATO	03/25/09	11:34

Notes¹ Report Limit is lowest concentration at which quantitation is demonstrated.² Regulatory Report Limit is the quantification level listed in Montross WWTP VPDES permit # VA0072729.Authorization: R. L. ParnellDate: 3/30/09

**HRSD**

P.O. BOX 5911, VIRGINIA BEACH, VIRGINIA 23471-0911 • (757) 460-4205 • FAX: (757) 460-6586

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ANALYTICAL REPORT

Project: Westmoreland Cty - Montross WWTP
Customer Sample ID: Final Effluent
Sample Number: 931418
Project Code: WE_MONT_M
Sample Point: FNE
Sample Date: 03/12/09

Analyte	Method	Unit	Result	Report Limit ¹	Regulatory Report Limit ²		Analyst	Analysis Date	Analysis Time
Copper Total	EPA200.8	ug/L	7.2	0.5		7.3	CBATO	03/25/09	11:39
Hardness	SM2340B	mg eq_CaCO3/L	101	0.2			SWILLI	03/23/09	11:37
Zinc Total	EPA200.8	ug/L	79.6	2		68	CBATO	03/25/09	11:39

Notes¹ Report Limit is lowest concentration at which quantitation is demonstrated.² Regulatory Report Limit is the quantification level listed in Montross WWTP VPDES permit # VA0072729.

Authorization:

Robin Parnell

Date:

3/30/09

QUALITY ASSURANCE REPORT

Level 1

Project: Westmoreland County
Project Code: WE_MONT_M
Sample Point: FB; FNE
Sample Date: 03/12/09

Analytical Run Information	Cu	Zn
Method	200.8	200.8
Units	ug/L	ug/L
Method Detection Limit (MDL)	0.08	0.15
Report Limit (RL)	0.5	2
Average LRB	<0.08	0.40*
Total Metals	Cu	Zn
Sample ID: WE_MONT_M FNE		
Matrix Spike Conc.	50	100
MS Percent Recovery	88%	82%
MSD Percent Recovery	90%	85%
MS/MSD RPD	2	2

LRB - Laboratory Reagent Blank

MS - Matrix Spike

MSD - Matrix Spike Duplicate

RPD - Relative Percent Difference

*Report Limit is lowest concentration at which quantitation is demonstrated. Values below report limit should not be used for compliance determination due to a high degree of uncertainty.

Validated By: 

Date: 03/30/09



CENTRAL ENVIRONMENTAL LABORATORY

1432 AIR RAIL AVENUE
VIRGINIA BEACH, VA 23455TEL: 757-460-4214
FAX: 757-460-6586

CHAIN OF CUSTODY

PROJECT NAME/CODE: Westmoreland Co. Montross WWTP

ANALYSES REQUESTED, CGN & NUMBER OF CONTAINERS

HRSD Use Only		Circle One		Circle One		ANALYSES REQUESTED, CGN & NUMBER OF CONTAINERS										Project in Lims?		
CUSTOMER SAMPLE ID	PROJECT CODE	SAMPLE POINT	DATE	TIME	SAMPLED BY	MATRIX	SAMPLE TYPE	Total Metals (5)	Dissolved Metals (55)	Cyanide (4)	Sulfide (18)	Volatile 624 (10...101)	Semivol 625 (9...9m)	TBT (31...31b)	Cl (12)	Yes	No	
	WE_MONT	FB	3/12/2009	1045	LG	L	G	1	1									
	WE_MONT	FNE	3/12/2009	1115	LG	L	G	1	1									
	WE_MONT	FNE	3/12/2009	1150	LG	L	G			1		10						
	WE_MONT	FNE	3/12/2009	1120	LG	L	G				1		14	3	1			
						L S	C G											
						L S	C G											
						L S	C G											
						L S	C G											
						L S	C G											
						L S	C G											
						L S	C G											

COMMENTS:

Temp. Requirement		*Preservatives	
Relinquished by / Signature <u>Laura Brown</u>	Date/Time <u>3/13/09 706</u>	*Hg, Metals (pH<2 - HNO ₃) (Clean metals check in section)	
Received by / Signature <u>Maria Stone</u>	Date/Time <u>3/13/09 0707</u>	*O&G (pH<2 - HCl, check in section) & store ≤ 6 °C	
Relinquished by / Signature <u>Maria Stone</u>	Date/Time <u>3/13/09 0707</u>	*CN (pH>12 - NaOH) & store ≤ 6 °C	
Received by / Signature <u>Justin Hall</u>	Date/Time <u>3/13/09 0727</u>	*Sulfide (pH>9 - NaOH+ZnAc) & store ≤ 6 °C	
Relinquished by / Signature	Date/Time	*Micro (Na ₂ S ₂ O ₃ + EDTA) & store < 10 °C	
Received by / Signature	Date/Time	*COD, NUT, Phenols	
Relinquished by / Signature	Date/Time	*TOC (pH<2 - H ₃ PO ₄) & store ≤ 6 °C	
Received by / Signature	Date/Time	*BOD, TSS, TVSS, Turbidity, Surfactant, Sulfate store ≤ 6 °C	
		*NUT Non Acidified, Conductivity, Organics store ≤ 6 °C	
		*Cr (VI) (pH 9.3 - 9.7 - (NH ₄) ₂ SO ₄) & store ≤ 6 °C	
All sample(s) met proper *preservation requirements. Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		Int <u>MR</u>	

Sample Type: C=Composite, G=Grab

Matrix: L= Liquid, S= Solid

CGN: Container Group Number

NOTE: ALL APPLICABLE INFORMATION MUST BE COMPLETED PRIOR TO ACCEPTANCE.